Ohio Environmental Protection Agency

Division of Surface Water

Application for Authorization
Class B Biosolids Beneficial Use Sites

Biosolids Treatment Works Information

Treatment works name: Dovetail Energy, LLC		
Ohio NPDES permit #: 1IN00305*AD		County: Greene
Mailing address: 1146 Herr Rd.		
City: Fairborn	State: Ohio	Zip: 45324
Operator of record: Bruce Bailey, VP of Technical Affairs		
Telephone number: (216) 986-9999		
Email address: bbailey@quasareg.com		

Certification Statement

1. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

2. I have read and understand Chapter 3745-40 of the Ohio Administrative Code (OAC) and I agree to beneficially use biosolids in accordance with all applicable beneficial use requirements and restrictions established in Chapter 3745-40 of the Ohio Administrative Code.

3. I agree to only beneficially use biosolids that have satisfied a pathogen reduction alternative and a vector attraction reduction option and have metals concentration below the pollutant ceiling concentrations as established in Chapter 3745-40 of the Ohio Administrative Code.

4. I agree to maintain all applicable records established in Chapter 3745-40 of the Ohio Administrative Code.

Signature _____ Date _____ / _____ / _____

This form shall be signed by the operator of record for the treatment works.

Form BUA-2

Owner Consent for Beneficial Use

Exemption 6

Certification Statement

1. I agree to allow biosolids generated by the treatment plant identified on Form BUA-1 to be beneficially used on my property at agronomic rates.

2. I agree to allow federal, state and local regulatory staff access to the beneficial use site for the purposes of inspecting and authorizing the beneficial use site, beneficially using biosolids, and collecting and analyzing samples from the beneficial use site. I reserve the right to ask the above parties for proper identification at any time.

3. I certify that I am holder of legal title to the property described on application form BUA-4, or am authorized by the holder to give consent for the land application of biosolids, and that there are no restrictions to the granting of consent under this form.

Exemption 6 _____ 11 / 25 / 2014
Date

In the event the owner of the beneficial use site changes, Form BUA-2 must be revised and resubmitted to Ohio EPA.

Division of Surface Water
Application for Authorization: Class B Beneficial Use Sites

Beneficial Use Site Operator Consent for Beneficial Use

Beneficial use site operator: Pitstick Pork Farms, Inc.		
Mailing address: 1146 Herr Rd		
City: Fairborn	State: OH	Zip: 45324
Telephone number: 937-879-0154		
Email address: tvpitstick@gmail.com		

Certification Statement

I agree to be responsible for complying with all applicable beneficial use requirements established in Chapter 3745-40 of the Ohio Administrative Code.

Tim Pitstick
Signature

9 / 15 / 15
Date

For purposes of this form, beneficial use site operator means the person who plants, grows, harvests or otherwise manages feed crops, fiber crops, food crops or pasture land on the proposed beneficial use site. In the event the operator of the beneficial use site changes, Form BUA-3 must be revised and resubmitted to Ohio EPA.

OhioEPA
Ohio Environmental Protection Agency
Division of Surface Water

Beneficial User Information

Beneficial user: Dovetail Energy, LLC		
Contact person: Bruce Bailey, VP of Technical Affairs		
Mailing address: 5755 Granger Rd. Suite 320		
City: Independence	State: Ohio	Zip: 44131
Telephone number: (216) 986-9999		
Email address: bbailey@quasareg.com		

Certification Statement

I agree to be responsible for complying with all applicable beneficial use requirements established in Chapter 3745-40 of the Ohio Administrative Code.

Signature _____ Date ____/____/____

For purposes of this form, the beneficial user means the person who sprays or spreads Class B biosolids onto the surface of the beneficial use site, injects below the surface of the beneficial use site, or incorporates into the soil of the beneficial use site, for the purpose of providing an agronomic benefit.


GRQ-07-02 (Do 45)
Armstrong Rd
Normandy Dr
Cliffside Dr
Horizon Dr
Millrace Dr
Redbud Dr
Rona Pkwy Dr
Peidmont Dr
Saratoga Dr
Young Dr
Spangler Rd
Black Ln
Cascade Dr
Harbor Dr
Byron Rd
Zapata Dr
Sports St
E Main St
Fairborn
Schwemann Dr
Hillridge Dr
Van Tress Dr
Lohnes Dr
Lewis Dr
Mcintire Dr
Margaret Dr
Grant St
Adams St
Winston Dr
June Dr
Swigart Dr
Archer Dr
Holmes Dr
Mann Ave
N Maple Ave
S Maple Ave
N Central Ave
Oakhill Ave
Circle Dr
Overlook Dr
Overlook St
Tritt Ln
Davis Dr
444
675
Erie Ave
Rowland Dr
N Diana Ln
Kirkwood Dr
Cleary Dr
Shapelgate Dr
3181 ft
© 2015 Google
Google earth

OhioEPA
Ohio Environmental Protection Agency
Division of Surface Water

Beneficial Use Site Information

Ohio EPA Site I.D. (Ohio EPA Use Only)

Field site I.D.: GRQ-07-02

Beneficial use site location: 0.4 miles W of Bryon Rd. on N side of Yellow Springs-Fairfield Rd.

County: Greene

Township: Bath

Latitude: 39°49'32.21"N

Longitude: 83°58'19.27"W

Total acreage proposed for beneficial use: 29.8

Type of beneficial use to be performed:

Surface application ☐
Injection or immediate incorporation ■

Ground slope percent:

Less than 15%	■	15% to 19.9%	■
Greater than 20%	☐		

Soil pH (s.u): 6.2

Bedrock depth (feet): >3ft

Soil phosphorus (mg/kg): 10.3

Bray Kurtz P1 ■
Mehlich 3 ☐

Type of crops to be grown:

Crop Type	Expected Yield
Corn	180 bu
Soybeans	60 bu
Wheat	
Pasture	
Hay	
Other:	

Soil Types:

Soil Unit Symbol	Soil Unit Name	Hydrologic Soil Group	Flooding Frequency Class
Ag	Algiers silt loam	B/D	None
EmB	Eldean silt loam, 2-6% slopes	B	None
EmB2	Eldean silt loam, 2-6% slopes, moderately eroded	B	None
EmC2	Eldean silt loam, 6-12% slopes, moderately eroded	B	None
MmD2	Miamian-Casco complex, 12-18% slopes, moderately eroded	C	None
MtB	Milton silt loams, 2-6% slopes	C	None
MtC2	Milton silt loams, 6-12% slopes, moderately	C	None

	eroded		
RhB	Ritchey silt loam, 2-6% slopes	D	None
RhC	Ritchey silt loam, 6-12% slopes	D	None
WeB	Wea silt loam, 1-3% slopes	B	None

Applicable isolation distances:

Type of Isolation Distance			
Surface waters of the state	■	Sinkhole/UIC class V drainage	☐
Occupied building	■	Private potable water source	☐
Medical care facility	☐		

Are any endangered species or endangered species habitats located on the beneficial use site?

☐ Yes	■ No

If "Yes" is marked, list the types of endangered species or endangered species habitat:

Have biosolids been beneficially used on the site since July 20, 1993?

☐ Yes	■ No

If "Yes" is marked, list the biosolids generators and years beneficial use occurred:

Generator	NPDES permit No.	Year of Beneficial Use

The application must also include all of the following:

- ■ A soil map of the proposed beneficial use site.
- ■ A frequency flood class map of the proposed beneficial use site.
- ■ An aerial map of the proposed beneficial use site that clearly identifies the entrance of the beneficial use site from the nearest road and all applicable isolation distances as established in Chapter 3745-40 of the Ohio Administrative Code.
- ■ A vicinity road map at or near the township level that clearly identifies the proposed beneficial use site with all roads labeled.
- ■ A copy of the most recent soil test results identified in this form.

quasar energy group

GRQ-07-02
Total Acreage: 29.8 Acres

N

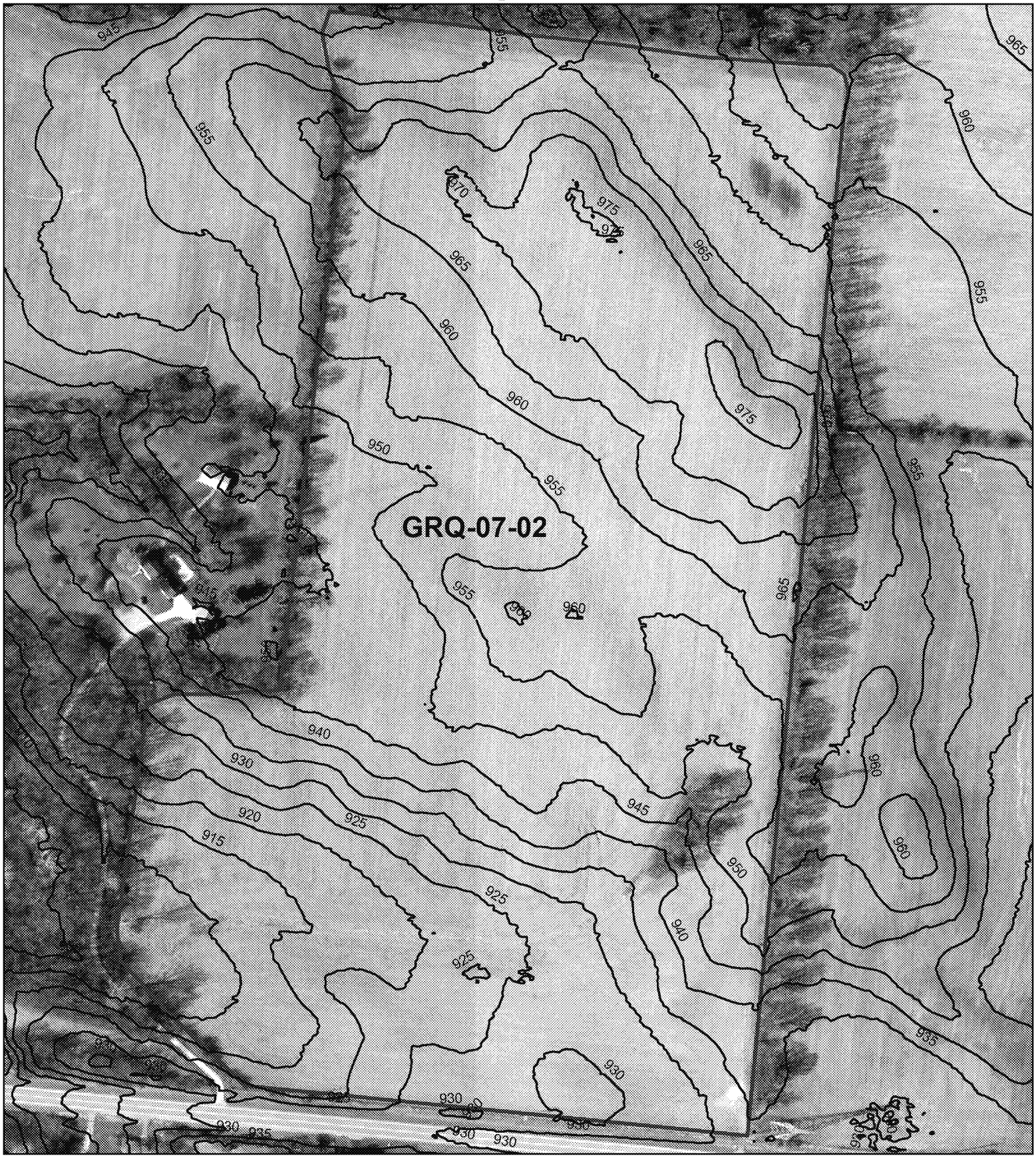
0 150 300 600 Feet

Waterways
Residences
33ft Water Buffer
100ft Res Buffer
Bedrock Exclusion
300ft Res Buffer

quasar energy group

GRQ-07-02
Total Acreage: 29.8 Acres

N



0 150 300 600 Feet

5ft Contours

ED_014244A_00000129-00010

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Greene County, Ohio
Survey Area Data: Version 12, Sep 26, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 6, 2012—Mar 10, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Greene County, Ohio (OH057)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ag	Algiers silt loam	2.5	5.8%
EmB	Eldean silt loam, 2 to 6 percent slopes	7.2	16.5%
EmB2	Eldean silt loam, 2 to 6 percent slopes, moderately eroded	0.3	0.6%
EmC2	Eldean silt loam, 6 to 12 percent slopes, moderately eroded	14.0	32.0%
MmD2	Miamian-Casco complex, 12 to 18 percent slopes, moderately eroded	3.3	7.7%
MtB	Milton silt loam, 2 to 6 percent slopes	7.4	17.0%
MtC2	Milton silt loam, 6 to 12 percent slopes, moderately eroded	6.3	14.5%
RhB	Ritchey silt loam, 2 to 6 percent slopes	0.1	0.2%
RhC	Ritchey silt loam, 6 to 12 percent slopes	0.6	1.3%
WeB	Wea silt loam, 1 to 3 percent slopes	2.0	4.6%
Totals for Area of Interest		**43.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties

Custom Soil Resource Report
Map—Depth to Any Soil Restrictive Layer (GRQ-07-02)

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Lines

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Points

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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Source of Map: Natural Resources Conservation Service
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Coordinate System: Web Mercator (EPSG:3857)

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Table—Depth to Any Soil Restrictive Layer (GRQ-07-02)

Depth to Any Soil Restrictive Layer— Summary by Map Unit — Greene County, Ohio (OH057)				
Map unit symbol	**Map unit name**	**Rating (centimeters)**	**Acres in AOI**	**Percent of AOI**
Ag	Algiers silt loam	>200	2.5	5.8%
EmB	Eldean silt loam, 2 to 6 percent slopes	>200	7.2	16.5%
EmB2	Eldean silt loam, 2 to 6 percent slopes, moderately eroded	>200	0.3	0.6%
EmC2	Eldean silt loam, 6 to 12 percent slopes, moderately eroded	>200	14.0	32.0%
MmD2	Miamian-Casco complex, 12 to 18 percent slopes, moderately eroded	>200	3.3	7.7%
MtB	Milton silt loam, 2 to 6 percent slopes	76	7.4	17.0%
MtC2	Milton silt loam, 6 to 12 percent slopes, moderately eroded	76	6.3	14.5%
RhB	Ritchey silt loam, 2 to 6 percent slopes	46	0.1	0.2%
RhC	Ritchey silt loam, 6 to 12 percent slopes	46	0.6	1.3%
WeB	Wea silt loam, 1 to 3 percent slopes	114	2.0	4.6%
Totals for Area of Interest			**43.6**	**100.0%**

Rating Options—Depth to Any Soil Restrictive Layer (GRQ-07-02)

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Hydrologic Soil Group (GRQ-07-02)

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

Custom Soil Resource Report
Map—Hydrologic Soil Group (GRQ-07-02)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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Table—Hydrologic Soil Group (GRQ-07-02)

Hydrologic Soil Group— Summary by Map Unit — Greene County, Ohio (OH057)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
Ag	Algiers silt loam	B/D	2.5	5.8%
EmB	Eldean silt loam, 2 to 6 percent slopes	B	7.2	16.5%
EmB2	Eldean silt loam, 2 to 6 percent slopes, moderately eroded	B	0.3	0.6%
EmC2	Eldean silt loam, 6 to 12 percent slopes, moderately eroded	B	14.0	32.0%
MmD2	Miamian-Casco complex, 12 to 18 percent slopes, moderately eroded	C	3.3	7.7%
MtB	Milton silt loam, 2 to 6 percent slopes	C	7.4	17.0%
MtC2	Milton silt loam, 6 to 12 percent slopes, moderately eroded	C	6.3	14.5%
RhB	Ritchey silt loam, 2 to 6 percent slopes	D	0.1	0.2%
RhC	Ritchey silt loam, 6 to 12 percent slopes	D	0.6	1.3%
WeB	Wea silt loam, 1 to 3 percent slopes	B	2.0	4.6%
Totals for Area of Interest			**43.6**	**100.0%**

Rating Options—Hydrologic Soil Group (GRQ-07-02)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

lb/A

BROOKSIDE LABORATORIES, INC.

74155-3

SOIL AUDIT AND INVENTORY REPORT

Name Dovetail Bio Energy/Renergy City Marengo State OH

Independent Consultant Brookside Consultants of Ohio, Inc. Date 10/01/2015

Sample Location DO45			1	2	3		
Sample Identification			1of3	2of3	3of3		
Lab Number			0461-1	0462-1	0463-1		
Total Exchange Capacity (ME/100 g)			12.31	10.59	9.61		
pH (H_2O 1:1)			a 7.5	6.1	5.0		
Organic Matter (humus) %			1.91	1.98	1.73		
Estimated Nitrogen Release		lb/A	58	60	55		
ANIONS	SOLUBLE SULFUR*	ppm	9	8	10		
ANIONS / PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	41	37	41		
		ppm of P	9	8	9		
	BRAY II	lb/A P as P_2O_5	73	37	32		
		ppm of P	16	8	7		
	OLSEN	lb/A P as P_2O_5					
		ppm of P					
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	3366	2478	1410		
		ppm	1683	1239	705		
	MAGNESIUM*	lb/A	752	490	190		
		ppm	376	245	95		
	POTASSIUM*	lb/A	142	226	120		
		ppm	71	113	60		
	SODIUM*	lb/A	44	40	48		
		ppm	22	20	24		
BASE SATURATION PERCENT							
Calcium		%	68.36	58.50	36.68		
Magnesium		%	25.45	19.28	8.24		
Potassium		%	1.48	2.74	1.60		
Sodium		%	0.78	0.82	1.09		
Other Bases		%	3.90	5.20	7.40		
Hydrogen		%	0.00	13.50	45.00		
EXTRACTABLE MINORS							
Boron* (ppm)			0.67	0.60	< 0.20		
Iron* (ppm)			113	118	124		
Manganese* (ppm)			214	137	83		
Copper* (ppm)			2.08	2.10	1.53		
Zinc* (ppm)			1.96	1.91	0.88		
Aluminum* (ppm)			562	678	841		
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						

a - alkaline soil

* Mehlich III Extractable